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E K I S T I C S

HOUSING & PLANNING ABSTRACTS

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EDITORIAL

It is now two years since Dr. C.A. Doxiadis started to finance the compilation of a monthly collection of abstracts from current publications on planning and housing for the use of members of his organization - particularly those in the field, distant from libraries and periodicals.

During the first year the material was compiled with the help of Miss McNamara, of the City Planning Library at Harvard University; during the second year - when the work had grown to require more time than she could spare - Miss Shillaber of the Rotch Library of Architecture at the Massachusetts Institute of Technology took over. The issues - then called the "Tropical Housing and Planning Monthly Bulletin" - were distributed only to Doxiadis Associates and a very few research organizations. Contents included abstracts of books, articles, United Nations documents, Conference discussions, academic papers, and even letters: any items of comment for information that it seemed might be useful to the man in the field concerned with carrying out housing or planning projects.

This year the bulletin comes out in a new format, with a new title, and Dr. Doxiadis has agreed that its circulation should be increased on an exchange basis to include such university departments, research institutes or other similar bodies as are able and willing to send from time to time either publications or unpublished material (perhaps a copy of an interesting student thesis). These documents should be sent to Cambridge, Massachusetts, for study and they will afterwards be forwarded to Athens where Dr. Doxiadis is building up a considerable technical library for the use of students and others.

Our new title EKISTICS has already created some interest and discussion. Dr. Doxiadis explains that this is a good Greek word which embraces a rather wider field than that covered by the term 'human ecology': the inter-relation of man and environment, including the systems of human settlement.

In the editorials we shall draw attention to articles in each Bulletin which we consider of especial interest. To some extent we shall continue to be most concerned with the problems of housing and planning in the warmer climates partly because we think the biggest jobs are yet to be done in such areas. But we shall be increasingly alert to developments throughout the world.

Articles related to housing in the present issue may serve as an example. "Cooking and Fuel Economy in Low-Cost Tropical Housing, by the British Department of Scientific and Industrial Research, provides valuable insights into the very important cooking problem in both Africa and Asia. Contrasted to this study may be that of A. Indinsky, "The Expansion of all Types of House Construction," in the Soviet Union.

Articles concerned with planning too illustrate our point. Roland Pré has set out a commendable approach in his "Vers un Urbanisme Authentique de la Naissance des Grands Ensembles à la Mobilisation des Masses." Two unpublished papers by A. Doudai, "Introduction to Regional Planning in Israel," and "Kiriat Gat New Town," show remarkable activity in Israel. Finally, an

article by Hans Blumemfeld on "Residential Densities" sets forth the idea that, within an urban area, there is a pont of too low residential density as well as the familiar situation of too high densities.

NOTE: The lettering at the top of each page refers to Doxiadis Associates system of classification. The figures below each title refer to the Universal Decimal Classification.

HOUSING

E T

Architectural Forum. "OBSTACLES FROM CASABLANCA." August, 1957, p. 222 (Illustrations)
728.3 : 690.37 (6)

1. In laying out a settlement for natives of Casablanca, planners determined that the new apartment units ought to maintain a certain similarity of relationship to the cave-like dwellings from which residents came.

2. To meet this requirement, a variety of highly unconventional shapes were brought about in the structures. To the casual visitor it is said to resemble an obstacle course.

3. Certain features of these housing units, however, are worthy of note. They are known to provide better ventilation, soundproofing and shade control than traditionally offered by natives quarters, which they themselves modify.

4. One unit for example, called the "Tower House," has six two-room apartments on each floor.

E.S.T.

Architectural Record. NATIVE MATERIALS, MODERN METHODS BUILD HOMES FOR KOREA. Vol. 121: 7, June 1957, p. 235-236 (illustrations).
728.3 : 693 (5)

1. High density of population in Korea makes it necessary to build multi-story units. Up-to-date housing has been erected with modern building methods and the sparse materials native to the country. These, with man-power, provide much needed large-scale housing at low cost--such as the project in Seoul.

2. Clay being the only native building material Korea possesses, it was decided to import a small, inexpensive sintering hearth with which the clay could be converted to a clinker. This, ground, would provide a light-weight aggregate suitable for the on-site manufacture of concrete block. The completed blocks are fireproof and have greater insulating value than standard blocks (an important factor in Korea's cold climate). Two wythes of 4-inch block with an air space between are used for the exterior walls, while the interior partitions are formed of single rows of hollow blocks.

3. The method employed to manufacture the concrete beams used for roof and floor construction saved up to 90% of the steel required for ordinary concrete beams.

"Developed by the Pacadar Corporation of Puerto Rico, the method employs a 600 ft. casting bed with high strength wires stretched over its entire length. After the wires have been pretensioned to 85% of their ultimate strenth, the concrete is vibrated into steel forms of various lengths and allowed to set before being placed in compression by the releasing of the tension on the steel wires. Cast in T-shape, the beams are laid up to 3 ft. 3 in. on center to form the skeleton framing. Precast concrete filler blocks shaped to rest on the beams flanges provide a flat slab for floor and ceilings."

4. New features, such as plumbing, are sometimes unfamiliar to occupants; but, generally, the traditional Korean pattern of life, "living on the floor," continues. Very little furniture is used.

5. The practical and comfortable radiantfloor heating system, known for centuries in Korea as "Ondol," has been adapted to the new homes. When this system is used in row houses, combustion gases from the kitchen stove flow through a labyrinth of chambers under the floor-slab to a chimney at the far end of the room, heating the floor en route. Second floors are provided grills, and upstairs room heating is supplemented by space heaters. In apartment houses this has been modified to use the hollow spaces in the floor construction as ducts for a warm air heating system: Heated air is forced through registers near the outside walls and circulates across the room to the return.

6. A team of American and Korean architects designed the project. Carl G. Lans, architect and technical director of the Homes for Korea Program, supervised the construction carried out by Korean labor.

B.E.G.N.P.S T.

Davidson, Robert L. CHECK LIST FOR LOW COST HOUSING IN UNDERDEVELOPED COUNTRIES. Inter-American Housing Center, Colombia, July 24, 1956. 728 (1)

1. The memo is described as a "rough draft of a check list" which "does not pretent to cover any of the subjects adequately." It is rather an attempt to outline a method of approach to some of the many problems which confront those concerned with low cost housing in the less industrialized areas.

2. The approach is based on "up-grading local materials and method rather than trying to adapt or cheapen the materials and methods used in highly industrialized countries." But it also held that the approach can be taken too far--with too much attention to cheapness.

3. The check list characteristic applies only to the first section: "Policy decisions as to group to be housed." Within this is"

   a. The income groups for whom dwellings are to be built (low, middle or special groups).
   b. Total price of dwelling related to family income (separately for low and middle incomes, with choice between 1, 1.5, 2.5 and 3 as multipliers for family income and reference to the standard of 2 x yearly income in the USA).
   c. Budget or money available (for land, urbanization, dwelling).
   d. The preliminary very rough cost estimate (division of budget figures by unit costs to arrive at lineal and square meters obtainable.)

   The method is expected to indicate that "it is apparently impossible to build the size dwelling and on size lot desired for the average family." this is the statement of the problem.

4. The second section. "Policy decisions to meet this problem," is an outline and evaluation of alternatives.

   a. Financing: subsidy (at last resort), decrease interest rate, increase amortization period.
   b. Aided self-help, cooperative or mutual self-help.
   c. Multi-family dwellings (row dwellings, multi-story dwellings and reduction or urbanization and land costs per family unit).
   d. Building Codes (need for modernization and flexibility).
   e. Site Planning (possible reduction of 40% in urbanization costs).
   f. Standarized Plans (use of a module based on building unit, minimum of variation in door and window sizes).
   g. Methods of letting contracts (prior expert cost appraisal, bonus for costs reduction, subcontracting -- several should be explored).
   h. Construction Loans (completion bonds).
   i. Custom fees, duty, etc. (possible exemptions for low-cost house building material).

5. The third section deals with various construction methods for roofs, floors, and walls. The following roofs are described and evaluated: thatched, corrugated metal, corrugated asbestos, - cement, wood, flat

reinforced, arched, parabolic arch, precast concrete ribs and roof plank, half cylindrical or quonset dwelling unit, "U" plank. Replacement costs, interest, and insurance should all be counted in the final choice. For floors and foundations it is held that most any dry soil, with certain support, is sufficient. Spread footings are said to be often unnecessary or over-elaborated. Grade beams too are often a luxury. A slab on ground can be considered either as a supporting mat or as protection from soil moisture. The history of earth floors (sometimes mixed with cow dung) is reviewed. The use of asphalt as a flooring material in low cost housing is suggested. Practices of surfacing earth floors are compared for Colombia (asphaltic earth), Panama (latex), Guatemala (latex-alumina cement), and Nicaragua (clay or thinly bedded cement tile). In the discussion of wall construction methods the impression that earthen walls are always the cheapest is denied. It is said that the relative cost in determined by the location, climate, and other factors. A comparison of adobe and several types of concrete construction methods is given. The use of "no fines" concrete is said to be especially promising. In special areas brick, split bamboo, woven reeds, wattles and daub and insect-resistant wood may be the best for low cost housing.

6. Utilities make up the fourth section. In terms of sanitary facilities it is held that there can be no intermediary between the properly constructed "privy" toilet and the porcelain water closet. The "squat" toilet is perhaps preferable in some respects but not perfected from the sanitary standpoint. The use of pan and water seal (as in railway cars) is deemed a possibility in areas where the water is scarce. But the outdoor "privy" is the standby for low cost housing. Electrical facilities are often designed with the belief that all hazards are to be eliminated. For low cost housing this assumption is too costly. It is suggested that "Romex" insulated wiring or the newer plastic insulation be accepted over conduit or BX.

C.E.G.N.P.S.T.

Gorynsky, Julius. BETTER HOMES FOR EUROPE. United Nations Review (Reprint.) April, 1957, vol. 3, No. 10.
728 (4)

1. The author was for three years Chairman of ECE's Housing Committee in Poland. He has been associated with the Polish government's urban construction activities and is presently Director of Poland's Scientific Housing Institute.

2. It is "heartening" in 1957 to be considering fundamental problems of government policy (mainly financing and costs of building) in contrast to assessing and communicating building material needs in 1946. Since the emergency European Sub-Committee on Housing was set up in 1946 to consider great numbers of damaged and destroyed structures, "distinct improvement" is shown in Europe as a whole; but in some countries the level of house construction is "well below that required for a net improvement."

3. Set up as a regular Sub-Committee on Housing by the Economic Commission for Europe (ECE) in 1947, the work of this group became so important and widespread that it was raised to full Committee status in April, 1954. Activities have been significant, including the following: recommendations to national governments embodying long range programs of permanent housing; promotion of the exchange of technical knowledge; work on comparable statistics and exchange of documentation of construction methods (by working parties and later by the (CIB) International Council for Building Research, Studies and Documentation). One particular achievement of the CIB has been the publication of an exhaustive glossary of identical terms used in construction of homes, office buildings, hospitals, schools and other structures. The glossary is in English, French, Swedish, Danish and Serbian; and other languages are to follow. Visits of teams of specialists to Norway, Switzerland, France (1954), Poland (1955), Belgium and the Netherlands (1956), Austria (1957) have been made and one is planned next year to Czechoslovakia.

4. The mission of housing experts in the requesting underdeveloped countries has been to study in detail definite housing problems, submit a concrete program of possible solutions, and organize internationally mutual assistance.

5. Presently 22 European countries have delegates to the Housing Commitee. These experts are said to profit by a common meeting place where practical information on building and housing can be acquired and critical analysis of housing problems made. With the language barrier removed by UN interpreters and the meticulous studies prepared by the secretariat, conclusions and recommendations can be evolved toward concrete economic and technical problems. Broadening of contact in all Europe and recent interest by eastern European nations (notably Russia) makes the work even more important.

6. Special credit is extended the ECE permanent secretariat assigned to housing who are said to be remarkably efficient and productive for their small number. Its help to the committee has been considerable.

7. The principle problems the committee should now turn to are the following. First, assistance to less industrialized countries. Second, lowering the cost of construction, as related to construction modernization and creating a favorable climate for the building industry. ("The broad economic aspects of housing and the economic implications of technical advances" are the primary consideration). Interest in stimulating building innovation, such as new prefabrication ideas, continues; but the need now is to go beyond the purely technical. Examination is of needed questions such as government attitude toward house financing, possible regional housing policy in suitable areas, slum clearance, and rent structures. Statistics collection projects give double value in that they both provide information and serve to standardize statistics in individual countries. Work even this broad will not be superficial; it will ultimately serve the cause of peace.

8. The role of the CIB will be to take over the technical building side of the committees work and studies. The committee will then be able to concentrate on the larger economic questions and to define the direction of technical studies. Without being utopian the committee may set the task of "working out the principle factors of a progressive housing policy for all Europe and proposing solutions embracing collaboration on methods and mutual technical and economic assistance."

9. In reducing the cost of construction, a uniform basis of comparing costs is needed, as are standardized criteria for sound housing projects, low cost types of single and multiple urban dwellings and advanced construction methods. Experimental buildings in different countries are suggested for systematic study of the influence of various factors on construction cost. Related to the problem of how many houses are needed is that of extending the life of a house.

10. In dealing with the problem of quantity needed, the provision of amenities (such as electricity, running water, baths and heating as well as airy, clean surroundings, freedom from pollution of air and bad sanitary conditions, and sound insulation for privacy) is essential.

11. Technical advances of modern times are felt to be capable of solving both the quantitative and the qualitative aspects of the European housing problem - if these advances are taken advantage of. The goal is "to provide adequate housing for every individual in Europe and to provide it at a reasonable cost." Working out the general blueprints is the job of the Housing Committee.

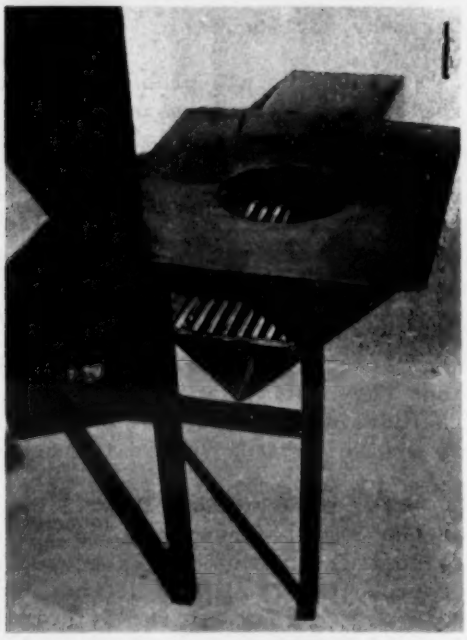


Fig. 8 O.C.A. Stove, Bukavu, Belgian Congo I
Made locally by welding steel sections at a cost of about 53 shillings, it burns firewood or, with a firegrate, peat.

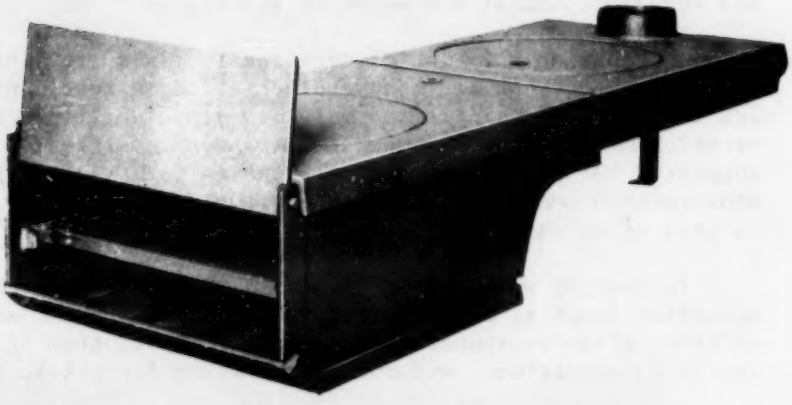


Fig. 11 Kali cooking stove Made in Scotland for use in Africa for burning firewood or charcoal. (Illustration by courtesy of Messrs. Smith and Wellstood Ltd.)

Fig. 15 The Delft type cooker which is made locally in Hong Kong. The cheapest model of this type can be bought for H.K. $2.10 (about 2s 8d)

E.G.S.

Great Britain, Department of Scientific and Industrial Research, Colonial Building Notes, No. 45 (June, 1957) A. COOKING AND FUEL ECONOMY IN LOW-COST TROPICAL HOUSING. (57517) 21 p. illustrations.
643.33 : 690.37

1. The ratio of fuel:rent cost is said to vary in the tropics between 1 : 1 and 1 : 1.5. In Britain the ratio varies from 1/4 : 1 to 3/4 : 1, even though fuel is needed more for heating the dwelling. It is held probably that fuel costs more and is not as efficiently used in many tropical areas.

2. Cooking and Firewood. The use of "three stone" cooking fireplaces is described, with the wood fuel ignited by palm oil or kerosene. Distribution of variations in Uganda are tabled. The more complex moulded clay and brick fireplaces are found in some parts of Africa. A scarcity of firewood in most parts of Africa is indicated. Smoke and soot problems have brought about the practice of building the kitchen away from the rest of the house; but theft and other problems are coming to make this arrangement unpopular.

3. Suggestions to improve wood fires for cooking. Problems of storage, burning long lengths, burning toward the front of the grate, and failure to allow the chimney to get hot all pose problems in larger towns. It is suggested that other fuel sources be sought and that, where wood-burning does continue, better stoves and housecraft practices may be the answer.

4. Improved wood-burning stoves. Several are described and photographs are provided. The "smokeless chula" developed in India has now been introduced into Nigeria. Another, developed in the Belgian Congo, burns wood but can be adapted to burn peat. A concrete stove developed in Uganda has proved expensive and its movable parts subject to pilferage. An improved cast iron model is now being developed in Rhodesia. In Tanganyika a similar stove, built in Scotland, is being adopted for urban African housing. It is said to be "most satisfactory." It is believed that education must go hand with improved cooking stoves.

5. Other solid fuel cookers. Coal is usually expensive and hardly ever used. But the use of charcoal is fairly widespread. It can be bought commercially or made at home and varies considerably in quality. Advantages of cleanliness of storage as well as use make it worthy of increased manufacture. Briquettes from various by-products can be made by several expensive but high producing machines. Peat briquettes are used in the Belgian Congo.

6. Kerosene cookers. In towns where firewood is very scarce, including large town like Singapore and Hong Kong, kerosene may be the most economical fuel in low cost housing. Indeed the use of this fuel appears to be increasing in such areas and should be encouraged. However, "no really satisfactory oil stove, strong enough and simple enough to meet the needs of the average African woman has yet been devised for sale at a reasonable price." But in the larger cities construction costs (in permanent cooking facilities), maintenance costs (through soot and smoke) are both reduced

by the promotion of kerosene for cooking. Taxes on kerosene should be closely checked.

7. Gas cookers: using town or bottled gas. In only a few territories is piped town gas available, and often it is generated from imported coal. Even more rare is the existence of natural gas available for cooking. Some bottled gas is being imported and sometimes is less expensive than wood. While the advantages of gas in cooking are clear, its distribution usually requires a fairly dense development. In a few places, however, its use is recommended either piped or in bottles. (This includes some Mediterranean countries.)

8. Electricity. In a number of territories, electricity is used for cooking; but is almost always expensive for low cost housing. The notable exception appears to be the use of small units only in Singapore, where the cost can be reasonable.

Table 2, titled "Monthly Cost of Different Fuels Used By Average Family, 4-8 Persons, In Typical Low-Cost Housing, Singapore," is reproduced below.

Fuel used	1956 Estimated monthly expenditure (Shillings)
Kerosene	8 - 23
Electricity (Small cooker)	15 - 22
Town gas	16 - 24
Charcoal	21 - 42
Firewood	27
Electricity (Large cooker)	40 - 42

E

Herzberg, Max. HABITATIONS A IBIZA. Aujourd'hui Art et Architecture, vol. 2, numéro 11 (January 1957) p. 64-65., illustrations. Text in French.
728.3 (46)

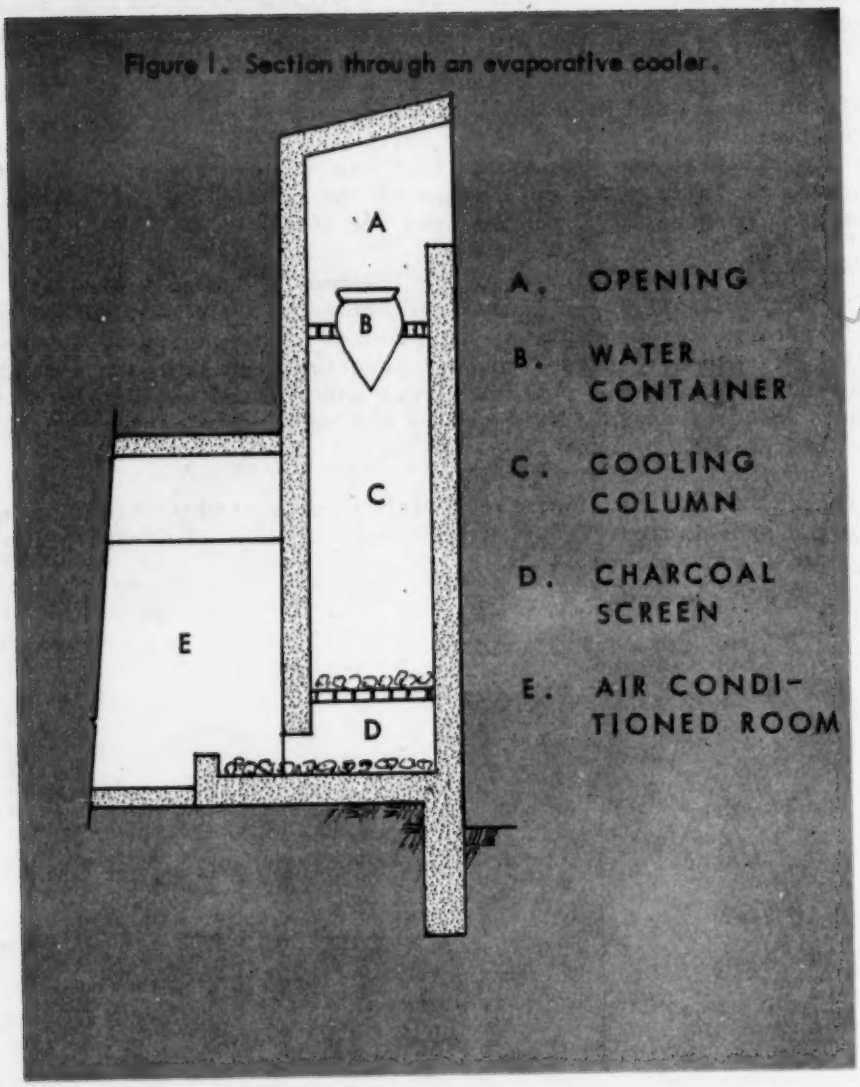
1. This is a verbal and photographic essay on the architecture of the island of Ibiza in the Balearic group. It was prepared by four students of the Ecole Speciale d'Architecture. A striking simplicity, comparable to some good modern design, is seen in the architecture of the island.

2. Historically, the island has been a melting pot of civilizations. Phoenician, Roman and Moresque have become fused - with the Latin acting as a balance. Simplicity of plan, narrow opening, decoration, minimum necessary circulation, respectful land use all characterize the pattern of lodging on Ibiza. The full value of the facades is felt in this land of hot sun, constantly clear sky, and red soil.

3. "A Ibiza, l'architecture, c'est l'homme." The only aims are toward utility and necessity. In these habitations, though many centuries old, certain present-day conceptions were found. Circulation is appropriate: the play of volume results from an imperative technique and considers the surrounding nature. Obstacles were under-lined and utilized, not hidden. Observers were distracted by the evidence of things which surprised by their hardiness.

4. The indigenous peoples, faced with a restricted problem and having at their disposal clear and limited means, found a simple solution--the one to man's own measure.

Figure 1. Section through an evaporative cooler.



E.G.T.

Housing and Home Finance Agency, International Housing Service.
AN EGYPTIAN EVAPORATIVE COOLER. (Ideas and Methods Exchange No. 11).
March, 1957. Explanatory diagram.
697.942 (6)

1. This is a presentation of Claraden Lee Holmes' description based on observations in the village of New Gourna in Upper Egypt. This design of powerless evaporative cooler is incorporated into the construction of two schools in the village.

2. "In hot dry portions of the world, evaporative coolers may provide welcome comfort and perhaps result in increased production. In areas without readily available sources of power where it has been found difficult to construct effective coolers, they could become quite popular."

3. "Air conditioning units have been built in the classrooms in the boy' and girls' schools and in the Omdah's (Mayor's) quarters in the recently constructed village of New Gourna. They are similar in design to a chimney, but function in reverse, using the down draft of cool air to increase efficiency. The unit is placed on the side of the room which faces the direction of the prevailing winds. Porous pottery jars near the top are filled daily with water which drips and seeps through the jars. The water, cooled by evaporation, then drops onto charcoal placed near and at the bottom basin. The air passing around the weeping jars and through the damp charcoal is cooled appreciably."

4. "The vertical shaft must extend above the highest part of the building by at least six feet or more for best effectiveness. In New Gourna the shafts were about three feet by six feet inside dimension. A ladder was installed inside the shaft so that the pottery jars could be filled with water each day. The opening at the top was about four feet by six feet in size. The shafts may be seen extending above the roof... of the school building....."

5. "These simple evaporative coolers will generally lower the temperature about 7 degrees. A drop of 7 degrees in addition to the natural coolness resulting from thick adobe walls makes a noticeable difference between room temperature and outdoor temperature."

D.E.F.G.S.T.

Housing and Home Finance Agency, International Housing Service. MUD BRICK ROOFS. (Ideas and Methods Exchange no. 42) March, 1957. 22 p. (Illustrations) Prepared by Claraden Lee Holmes, Architectural Engineer. (Ref. vol. 2, HIB - GA 14/15, Nov. Dec. 1956, pp. 73-74). 693.2 (6)

1. Beginning with a brief historical account of the use of sun-dried mud brick in Upper Egypt dating to 4000 B.C., this publication is mainly concerned with present day construction methods as used in the work of Dr. Hassan Fathy, the architect and archeologist, in the construction of New Gourna.

2. Examples of early mud brick construction are notably the granaries in the temple of Rameses II (2000 B.C.) and the more ambitious monastery near Asswan (about 890 A.D.) This latter structure may have been the first mud brick structure to support an upper floor by vaults. Smaller vaults were used beside the main vault, which was about 14 feet high.

3. New Gourna village, across the Nile from Luxor in Upper Egypt, was built to house the people of Old Gourna. Old Gourna is near the Valley of the Nobles, and many of the tombs of the ancient Pharaons lie deep beneath the existing village. The village is scheduled to be demolished by the Egyptian Government, for the entire area is to be a national park.

4. The design of houses in New Gourna has resulted from Dr. Fathy's study of the village people's needs and customs, and from his consequent attempt to introduce as much improvement as the people could absorb at one time. Innovations include the following: a drainage system preventing mudhole formation, household water reservoirs of locally made pottery; floor level latrine slabs (also locally made), built in furnaces of mud-brick for heat as necessary, (since baking is done in courtyards); built-in evaporative coolers; and a combination laundry-bathing facility in courtyards (later to be moved into houses). The ancient building method has been kept alive by Dr. Fathy; his improvements have not detracted from the method's simplicity.

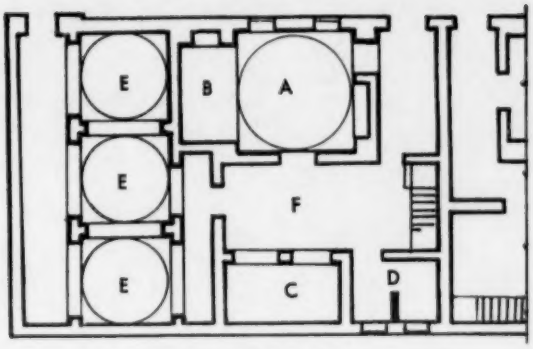
5. Construction to December, 1956 in New Gourna Village included 150 one-story and two-story homes, a large market place with shops and craft works, an open air theatre, a large recreation area, an administration building and town hall, two 12-classroom schools, a craft school and work shops, a community building and an excellent Mosque. (The Mosque has perhaps the largest mud brick dome, about 20 feet in diameter.) The village is intended for 5,000 to 6,000 population. Again here Dr. Fathy took psychological and sociological factors into consideration. A grouping of people in the new village is similar to that in the old one. The streets which separate the five main quarters are rather wide, and internal streets in quarters are narrow and angular, but sufficient for ambulances and fire-fighting equipment.

6. General descriptions of the bricks, mortar and various forms in the structures are given. Detailed techniques are further outlined for the mixing of the mud, the construction of vaults, high domes, low domes and the pendentives ("triangular pieces of vaulting which spring from the

FIGURE 13. The vault is starting to take form. The courses have now met and are continuous from side wall to side wall. The mason is shown tapping into place a stone in the soft mud mortar between the bricks. Because the bricks are rectangular in shape and are being placed to form a curve with inner edges touching, the outer edges are separated by a wedge shaped gap. Mud mortar has filled this gap and the mason is tapping a small stone into place at the outer edge. With the insertion of this small stone, the downward thrust is divided equally between interior and exterior edges of the brick. The grooves are also very noticeable in this photo. A two colored angular shapped guide has been placed in this photo to indicate the slope at a point half way between the top and the bottom of the vault.

FIGURE 14. This shows different stages of vault construction over three adjoining rooms. The small square block at the center of each vault, located on the end wall, is a guide for the masons in keeping the center of the vault in line and level. A trowel is seen in use but actually the mason only uses it to stir up the mud mortar.

First Floor Plan



Second Floor Plan

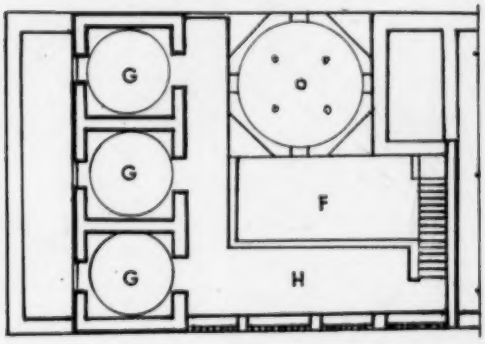


FIGURE 4. Plan of typical mud brick house-New Gourna, Egypt.

A. Main Living Room
B. Guest Bedroom
C. Family Room
D. Bath and Latrine
E. Stables
F. Reception
G. Bedrooms
H. Terrace

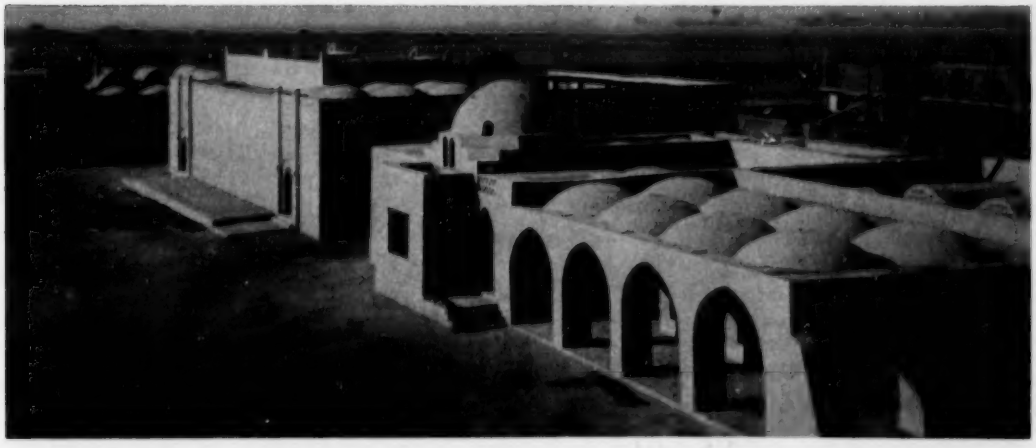


FIGURE 18. The Administration Building at New Gourna shows both the low and high dome types of construction. To the left and in the rear of the Administration Building is the Theater. In the right background are residences under construction.

corners of a rectangular plan and serve to allow the room enclosing it to be covered by a rounded plane or a dome.") One interesting treatment of rectangular rooms involves the combination of the vault and the dome.

7. It is concluded that while Dr. Fathy's solution improved village construction only under the particular set of condition, it can be hoped that his work will provide inspiration to others faced with using native materials and techniques.

E.S.T.

Housing and Home Finance Agency, International Housing Service. MODULAR COORDINATION FOR HOMES IN GREECE. (Ideas and Methods Exchange no. 43). April, 1957.
620.01 : 691.8 (495)

1. Text in taken from a broadcast by the Greek Section of the Radio-Diffusion-Television Française, Paris. Written for United States Information Service, the broadcast outlined the way Greece successfully used the modular coordination principle in rebuilding homes destroyed by the 1954 earthquake. Source of text quoted below is given as ECOTO Circular A-93.

2. "One thousand three hundred houses destroyed in an earthquake on the Greek island of Santorin... are being replaced by modern homes..."

"M. Elefterios Statkaris, Greek delegate, reported to the Main Working Party on Modular Coordination in the Building Industry (European Productivity Agency Project 174) that economical accommodation for the homeless was being provided by the system now being investigated by 11 European countries, Canada and the United States."

Mr. Statkaris said the standard blocks, 20 x 20 x 40 cm., were made from locally-cut pumice stone.

"The European Productivity Agency has developed a study and test project in modular construction in view of the need of European countries to reduce building costs.

"M. Statkaris said the experiment in the two wrecked villages of Sainte Euphimie and Lacythra was most effective and more economical than any other system to which it had been compared.

"The module, which most modern European experts declare is the modern key to the industrialization of building, is the method by which the dimensions of building parts are co-ordinated to secure flexibility in use combined with ease of production."

The blocks "are tremor-resistant in view of the island's geographical situation. Nearby is a partly submerged volcano," but (the) last earthquake was non-volcanic.

"Two thousand homes were destroyed but 700 were able to be repaired. Of the 1,300-families housing scheme, 50 families are already housed and 200 will soon be entering the modern one-storied bungalow-type dwellings.

"The use of modular blocks simplifies the work of architects on the site, said Mr. Statkaris. Their final aim is not only utility but preservation of the island's rustic charm which has made it popular with tourists.

"European building experts here said that the Greek experiment was important because it represented a new sans coffrage technique: the placing of stone blocks one on top of the other with vertical steel reinforcements thrust through."

E.G.O.S.

Hunt, Richard P. IT IS MOVING DAY IN JOHANNESBURG. New York Times, Sunday, June 16, 1957.
728 : 333 (68)

1. An account of the moving of the first native family from the squatters' suburb of Moroka to the new brick bungalows in Mapetla, considerable background on both the condition of the squatters's towns and of the new segregated developments in given.

2. The home left by the family was built by the father ten years ago. It was a mud-walled shack, twenty feet square, divided into three small rooms, under a low tin roof held by heavy stones. Holes in the roof were never patched. Floors were hard-packed earth. There were no windows, and neighbors' houses crowded around on three sides no more than two feet away. The family shared a public latrine. Water was carried by the wife from a public source. Furniture consisted of an iron stove, a wooden cupboard, chairs, mattresses and a table. Ten shillings per month were exacted for ground rent.

3. The new bungalows, which are being erected at the rate of forty units per day, consist of four rooms. They are described by housing officials as "austere." Inside walls are of unfinished brick work, and corrugated asbestos roofing is attached so as to allow some sunlight to enter. Kitchens have concrete flooring; other rooms have only earth, and occupants are expected to pack them with cow-dung and mud mixed. Each room has a large window. Garden space of forty-by-seventy feet is provided. Each family has its private outdoor latrine, and water is available less than 100 yards (along paved road) from the house. Within a few years, electricity will be installed. Rent for the example was £2 15s ($7.70) per month, and the family has the option to buy the house for about £200. Land would not be included in such a sale, and rent of £1 5s ($3.50) including taxes would still be required. Occupants are allowed freedom in making their own improvements in the bungalows, even while renting.

4. The program for this housing is part of a large clearance of slums in Johannesburg financed by a £3,000,000 ($8,400,000) loan to the city by seven mining finance houses. Sir Ernest Oppenheimer of the Anglo-American Corp. has fostered this thirty-year loan. Money from this fund will account for 15,000 dwelling units. Other government funds will provide for servicing the 15,000 sites. At the same time the government is building 8,000 houses for Negroes moved from existing suburbs. A government housing official is quoted as saying that by 1960 the back of the slum problem will be broken and that just about all badly housed natives will be relocated. The object is to get the most decent housing possible for the funds available and at the same time to keep the rent down to a reasonable level. Vacated houses will be razed.

5. The racial question appears especially in the totally government project. In some cases natives are shifted from owner to renter status. The segregation of these "townships" continues in controversy. But in the bungalow development, it appears that "their new house is more important for the moment than segregation." The city envisions the disappearance of some social ills with the removal of the shacks.

Indinsky, A. (Engineer-Architect). THE EXPANSION OF ALL TYPES OF HOUSE CONSTRUCTION. Izvestia, 12 December 1956, p. 2. Original text in Russian.
728 (47)

1. The basic nature of housing in mankind's needs and the large-scale nature of housing construction in Russia are stated. In the last five-year plan, 105.4 million square metres of urban housing was build with state funds. Individual housing too is expanding, accounting for 44% of all new apartments in 1955. Yet the shortage is still acute. The current five-year plan aims for well over 205 million square metres of state housing. The goal over the next ten years is to provide every family with a separate, well planned apartment.

2. Difficulties in achieving this task are outlined. The pre-revolutionary heritage in housing (urban housing comprised only 180 million square metres in 1913) and the destruction in World War II of 1.2 million homes are both seen as only external causes. Real blame is said to lie with the builders and architects. Homes are too expensive (ranging from an average of 50,000-60,000 rouples to a high of 100,000); and wasteful practices are prevalent. One such practice is the use of unnecessary decoration on facades.

3. The worst of wasteful practices, however, have to do with the unjustified exaggeration of room areas and heights. The world average for ceiling heights is said to be 2.3 -2.7 metres, while in Russia the figure is 3.0 -3.2 metres; individual rooms are 20 -24 square metres and as much as 30 square metres in size.

4. The unit of construction should be the room or even the apartment, rather than the "square metre of living space" now used in building allocations. For attempts to stretch the yield of "living space" can result in actual human discomfort. The typical apartment with several very large rooms and a quite small kitchen (4.5 -5.0 square metres) are crowded with several families <u>because it is so big</u>. This goes on despite the government policy of discontinuing multi-family apartments. The guise of claiming that these are really single units built "for hundreds of years" is not to be taken seriously.

5. Conditions indicate that the actual need is for small, one-family apartments. Evidence is seen in the fact that individual-constructed apartments are of about half the floor space used in apartments constructed by ministries and departments. Also recent all-Union competitions for new house designs show great interest in small apartments with small rooms. Rooms heights should be reduced to 2.7 metres; combined bath-toilet sanitary units should be built. Such apartments would have a total area of 40 -42 square metres and would cost about 30,000 rouples. Delays in the implementation of such projects must be eliminated.

6. "Comfort and economy are the two major requirements in housing." Builders and planners should realize that if housing is 20% cheaper, just that many more families will be able to get apartments. But building costs cannot be lowered at the expense of convenience. Five-story houses without elevators cannot generally be authorized.

7. Individual builders should be encouraged. Prejudiced attitudes toward workers building and having their own houses should be lessened by a realization that the house is an article of personal use similar to clothing, bicycles, automobiles, etc. But individual builders should change over to the construction of semi-detached houses. Apartment costs would thereby be reduced 8-10% and heating by 12-15%. This type of housing is preferred by residents in the Urals and in the North. In the West the "terrace" (row) housing is a modification which reduces the price substantially.

8. Building of attics in houses is favored, for it reduces the cost per room by 8-10% and increases the total area of the house. But, though attics are common in Baltic Republics and many other countries, both builders and planners are stubbornly opposed to building them. Preference in financing individual house construction should be given builders of attics as well as of semi-detached houses in order to "expedite the adoption of these progressive ideas."

9. Supply of building materials to individual builders needs attention. Favorable terms in the sale of window and door frames, certain ceiling components, stoves etc., are the first step. Specialists are needed to supply advice to such builders.

10. Co-operative building organizations, once very common, need to be revived on a new basis. Instead of making expensive multi-storyed apartment houses, they should now utilize local materials and labor of members to build one or two story apartment blocks.

11. Local materials, which were once popular but have fallen into undeserved disrepute, should be especially encouraged in the building of one and two story houses. These include pressboard from reeds, adobe, air-dried bricks, ground-cement mixture, and roofing granules.

12. Additional building materials could be obtained by the efficient use of industrial by-products and facilities. Blast furnace slag from metallurgical plants can be used in wall construction. And lime furnaces of sugar refineries could produce an additional million tons of lime for building. Various consumer products workshops also could produce articles for house construction.

13. Current timber economies are necessary, but the decline in output of the standardized wooden house should not be allowed to continue. More economical designs for prefabricated buildings could bring about a 100% output increase in such structures with no increase in the total quantity of timber used.

14. "In short, there are many means at out disposal for expanding the production of all types of housing in the near future and for successfully resolving one of the most difficult problems of life in our country."

E.M.O.

Lock, Max. HOUSING AND TOWN PLANNING IN THE MIDDLE EAST. Housing Review, May-June, 1957, Vol. 6: 3. pp. 79-82.
728 (56) - 711.4 (56)

1. Taken from a speech by Mr. Lock at the Housing Centre on April 2, 1957. It was based on experiences of the speaker, who has worked on planning projects in Jordan and Iraq. The Middle East is characterized as having a remarkable lack of prejudice against modern architecture despite its rich tradition in buildings. The most advanced ideas are welcomed.

2. The serious traffic problem of Amman, the capital of Jordan, is complicated by the city's being build on hills. The population of this city has increased from 30,000 to 200,000 during the past 20 years, and houses are jostled one above the other on the hillsides. Since the main road followed the river bed, at times of heavy rain there was serious flooding. To ease the traffic problem rather cheaply in this situation of space and housing shortage, it was suggested that a ring route be constructed with traffic bridges built on the roofs of housing blocks. At the same time the car parking problem could be eased by using the roofs of houses on the lower side of the street. Added expense in housing construction would be offset by savings in the bridges. A market on two levels was part of the redevelopment plan for the city centre.

3. The plan for the port of Aquaba posed altogether different problems. Four main residential communities were planned. Considering the pleasant climate and excellent bathing, special attention to the development of the sea front included hotels and other amenities.

4. In Iraq, Mr. Lock was first connected with the planning of Um Qasr on the Persian Gulf. Mr. Lock's study of planning and sociological problems, engineering studies by Dutch engineers, and economic studies by Sir Douglas Richie all pointed to the necessity of a port. A difficulty yet to be settled was that of getting the boundary shifted about two miles, for the new port would be very close to the Kuwait border.

5. Mr. Lock's main planning work in Iraq was in Basrah, a city of many canals. The major problem was to maintain brimful of water the big central creek, which was formerly rather empty and stagnant. This was done by means of a system of parallel lateral canals at a lower level, developed so that there would be a permanent flow of water. In considering the future of Basrah with its expected growth of population, and wishing to preserve the character of the place, a series of surveys were made. These included a Land Use survey for an overall picture, condition of properties, for the location of "black spots" needing renewal, and a Traffic survey showing what could be retained in present roads and what new was needed. In the Master Plan, Ashar Creek, connecting Basrah proper with Ashar, the port became the main "spine" of the city. Its boulevards on either side fan out to new residential neighbourhoods. These are separated by long wedges of green open space irrigated by lateral creeks draining the buildable land. These green wedges would provide sites for schools and other community facilities. To relieve traffic congestion, a new road from Margil in the east to the Ashar waterfront is needed. The programme envisioned to reduce the immense housing problem was a progressive redevelopment of all sarifa

(mud and palm matting) and mud brick housing with better houses in a more healthy setting. Having to build the emergency housing only on government owned land has given birth to the plan for a new town in Faisaliyah, to the northeast. The traditional courtyard was maintained in all schemes, for it was suited to the way of life of the people. Small squares with trees were provided, and arched streets could be covered with matting in the hot season. Roads had to be sited so as to benefit from cool northern winds. A civic centre, a wide variety of public buildings, and cultural facilities as well as industry, open space and improved shopping and transport facilities were outlined in the master plan.

6. In the discussion which followed his talk, Mr. Lock answered various questions. Among the points raised were:

a. Possibility of noise-proofing houses beneath the traffic bridge in Amman.

b. Comparison of house and street types between Basrah and Amman.

c. Influence of tradition and concessions to local custom in Basrah.

d. Density problems and the situation of Basrah with plenty of buildable land but a necessity for close grouping as protection from the sun.

C.E.I.J.K.T.

"Shinkun" Workers' Housing Company. 25 YEARS OF WORKERS' HOUSING IN ISRAEL. Tel-Aviv, 1957. (Photographs, plans and illustrations.)
728 (56)

1. This is a report of activities of Shikun, the urban workers' housing company under the economic branch (Hevrat Ovdim) of the General Federation of Labour in Israel (Histradut). Shikun was combined in 1955 with Neveh Oved, the company which had handled rural workers' housing; and this report sets forth the work of Shikun up to that time.

2. The beginnings of Shikun came as a result of much searching for a means of avoiding excessive rents for poor housing, developing new forms of urban life in housing projects and supplying garden space partial subsistence for early Jewish immigrants to Israel. The first project done by Shikun was the beginning of Kiriat Haim in 1930; apartment houses were soon to follow, due to high urban land costs. The turning point to garden-city type developments came in 1933 for a variety of reasons; and these "Krayot" (singular, Kiriat) were to be owned by cooperative societies composed of residents. Shikun Workers' Housing company was formally registered in 1934.

3. The first workers' garden cities included Kiriat Haim, near Haifa of 800 acres on which 1000 houses were built between 1930-39; and Kiriat Avoda, near Tel-Aviv, making up 270 acres and having 250 houses built before World War II.

4. Through the years of crisis and unemployment, 1936-39, Shikun continued to build and expand. Kiriat Amal was built for the Jewish National Fund, using labor of residents themselves. By 1939, three thousand houses housing 3370 families has been constructed by Shikun and Histradut activities.

5. The war years were those of preparation. Such planning made it possible to begin construction soon after the war. Between 1945 and 1948 more than 3300 apartments were built (a number equal to the construction between 1930-39); among these were at least 1000 apartments to be rented to immigrants.

6. Under the State of Israel a large amount of Shikun's work was that of constructing immigrant housing. However, no separate quarters were built for new arrivals--so that assimilation would be eased; only permanent apartments of normal size were built by Shikun; and cooperative housing as the only terms of occupancy for immigrants speeded merging into the community.

7. Veteran-workers' housing too was entered into by Shikun: the company constructed more than half of all houses of this type. Also 1000 apartments for families of permanent military personnel were built between 1950-52. Part of the veterans' houses were constructed in existing garden cities; but the new ones built were Kiriat Shalom, Kiriat Borochov (both near Tel-Aviv) Kiriat Eliezer and Kiriat Remez (both near Haifa) and Kiriat Hayovel (near Jerusalem). Extensive fund raising activities in the United States by shikun aided veteran-workers'housing.

"Shikun" Workers' Housing Company. 25 YEARS OF WORKERS' HOUSING IN ISRAEL. -2

8. Popular housing consisting of 6600 apartments were constructed by Shikun. These houses said to be more accessible and more quickly built than others in this program, and to have been chosen by 55% of applicants.

9. Summing up the twenty-five years of Shikun's activity, a total of 24,500 apartments have been built, including ordinary housing, immigrant housing, veteran and permanent army housing and Popular Housing. These have been in the areas of Tel-Aviv, Haifa, Jerusalem and elsewhere. The rate of construction has risen from an annual average of 340 in the decade 1930-39 to 3100 annual average in the six years 1949-1955. The occupational composition of residents indicates more than half were "workers" and nearly a third were "office workers." 70% of all housing constructed by Shikun was in garden cities, which were all well equipped with public facilities. Shikun's urban land acquisition policy was coordinated with that of the Jewish National Fund, in order to provide the least expensive public housing. Cooperative housing in which residents formed a responsive social unit has been constructed for 170 housing cooperative societies. By efficient policy, banking activities, and fund raising with American labor unions, Shikun contributed to less expensive housing. Finally, Shikun has pioneered in finding ways to solve housing problems. All these years and kinds of experience will be the very valuable contributions Shikun has to give to the new Shikun Ovdim Company.

B.E.H.U.

United Nations Economic and Social Council. REPORT OF THE COMMITTEE ON INDUSTRY AND TRADE. (Ninth Session) to the Commission (Thirteenth Session). General. E/CN.11/451 (E/CN.11/I&T/132) 18 March 1957. (ref. vol. 3, HIB - GA 23, July 1957, p. 300).
728

1. Following is extracted from Part VI, Report of the Working Party on Housing and Building Materials, paragraphs 87-96, p. 28-30 (E/CN.11/ I&T/ and Corr.1)

2. The Committee expresses appreciation of the report and recommendations of the ECAFE Working Party on Housing and Building Materials and considered that its work should be further intensified.

3. In noting measures which the Working Party had considered essential for strengthening the housing effort of the region, the Committee supported in particular those recommendations which related to the financing of housing programmes. It felt that there was an urgent need for establishing or improving financial institutions to encourage private savings which could be channelled into the provision of new housing units, especially for the low-income groups. It was also considered to be of unmost importance that the countries in the region establish coordinated housing programmes and assess, on a continuing basis, a country's housing needs in the light of available resources. With regard to legislative provisions requiring revision at an early stage special importance was attached to land acquisition laws, building codes and regulations, and taxation systems.

4. While there was agreement on the need for paying increased attention to the whole complex question of rent control policy, it was nevertheless, felt that a possible relaxation or lifting of controls should not contribute to an increase in rents beyond the ability to pay of the low income groups.

5. The Committee supported the Working Party's recommendation for further improving the productivity of the building and building materials industries with a view to reducing house building costs and improve quality.

6. In general it was felt that all the measures recommended by the Working Party deserved the attention of the governments of the region. However, some doubts were expressed as to the possibility of their early implementation in view of many other pressing problems calling for early solution particularly those connected with accelerated economic development programmes.

7. The Committee heard with interest a number of comprehensive statements on progress in housing in the various countries of the region. It was recognized that the provision of housing for the low-income groups was one of the most important and most urgent aspects within the general economic and social development programmes of the Asian countries and that in some cases, governments were according top priority to solving their housing problems. While some progress had been made in all countries of the region in increasing the number of houses and in intensifying the production of basic building materials, a great deal still remained to be done before even

the most basic needs could be met. It was, however, to be expected that housing programmes would gradually show increasing results concurrently with increased investments in housing and the increased availability of trained personnel at all levels.

8. Among the specific projects discussed by the Working Party, the Committee paid special attention to the current position of the Regional Housing Centres in India and Indonesia and to the proposed study tour by Asian housing experts. The Committee noted the progress made at the Centres in Bandung and Delhi. The Pakistan and USSR delegations were of the view that a regional centre be established under the auspices of the United Nations for the countries of the dry tropical zone in the Asian region and requested that appropriate organizations take early action in this respect.

9. The Committee noted the Working Party's suggestion to accord high priority to the proposed study tour.

10. The question of selecting experts in specific fields was considered in connexion with the representation at meetings of the Working Party. The Committee felt that it was important to have specialized items on the Working Party's agenda discussed by experts in these fields in order to obtain the most fruitful results from such discussions.

11. The Committee noted that it was proposed to hold a Seminar in Regional Planning during 1958 for which the Government of Japan had offered to be the host. The Seminar would be a joint undertaking of ECAFE, the United Nations Bureau of Social Affairs and UNESCO. It was noted that the location of industry in Asian countries would be one of the subjects for discussion in the Seminar.

PLANNING

B.E.G.I.O.Q.X.

Blumenfeld, Hans. RESIDENTIAL DENSITIES. Community Planning Review; Revue Canadienne d'Urbanisme. Vol. 7: 2, June 1957, pp. 82-84.
711.644 (4/9)

1. This paper was first read before the American Society of Planning Officials' National Planning Conference in March, 1957. Mr. Blumenfeld is now Deputy Director of the Metropolitan Toronto Planning Board and was earlier connected with housing and planning in the Philadelphia area.

2. Planning is seen as an analgam of prediction and prescription, but since the prescription is advisory, it can work only in the framework of prediction. "Prescription...can see to it that what is going to happen anyway will happen smoothly and efficiently."

3. The "right" residential density in urban areas is said to be 12,000 to 60,000 persons per square mile of residential area. Acceptable conditions can be created within this range, depending on the location, family type, and consumer preference. "There are upper and lower limits beyond which serious disadvantages appear."

4. The main concern of planners has been the prevention of excessive concentration due to poorly developed means of transportation. Methods of prescription have included zoning for minimum lot sizes, setbacks and yards, maximum coverage and height or floor area ratio. These have been effective in setting upper limits; and, because of economic pressure, predicting the population.

5. The private automobile and high speed roads produce quite a different situation around cities. Areas within city limits often develop at less than maximum permitted density. Suburban governments, supported by planners acting in the name of "public health and welfare," enforce low densities. Motivation of suburban restriction is often really the protection of the "in" taxpayer against any "outs" who would be unable to bear at least their share of the tax burden. This results in a class division between the central city and the suburbs. But in the names of "urban redevelopment" and "urban renewal" central cities are fighting back by destroying low income housing and replacing it with housing units for middle or higher incomes. This leaves the problem of the location of low income housing. Both the cities and the suburbs are said to be enlisting planners in a "class war of the 'haves' against the 'have-nots'." Redevelopment then hasn't been too successful; but low density suburbs are also unhappy. Densities of less than 4.5 per acre have several very real difficulties.

6. The first major difficulty of excessively low density is over-extension of the urbanized area. Included with this are: very large investments for road and utilities; long travel distance from inner areas to open land; long travel distances from outer areas to commercial, civic, and cultural facilities in the centre; an increase of daily vehicle-miles equal to about the square of increase in population.

7. A second drawback in such low density is that of isolation of daily life. The need for shops and facilities to be within walking distance is

stressed in even these areas. A walking distance of one-fourth mile allows for no more than 500-600 families per square mile (at 4.5 houses per acre.) Consequences are several: bus service, tax supported, can serve only peak periods at 10 minute intervals, and otherwise at half-hour periods; a public elementary school can barely be supported if 80-90% of children attend public schools; since local shipping centres require a market area of a least 1000-1200 families, at least half of the families in such areas live beyond normal walking distance; similarly, churches, clubs and other facilities are not attended by isolated housewives--resulting in a lack of participation in cultural and social affairs and finally, for such housewives, in a sense of frustration.

8. The final shortcoming in such low densities has to do with difficulties in the recruitment of labour. Many suburbs set aside large areas for industrial development, but the problem of low wage earners may become acute--since they have already been "zoned out." Consequences: (1) Adverse effects on morale and productivity, due to long travel, at best, and possible inability of employers to recruit a full staff. (2) Lack of ability to depend on neighboring cities for such labor, since they too will adopt restrictive zoning. The economic base of the whole area from which suburbanites derive their income may ultimatly be undermined.

9. It is held then that "There must be a floor as well as a ceiling for densities." Difficulties under the system of private land ownership and land development, however, are great. Absolute prescription is to be avoided, as is forcing land values to increase density. Two suggestions are offered:

   a. Advise and encourage building in suitable locations, apartments, row houses and other group housing less wasteful of land than detached houses on 60 or 80 foot lots.

   b. Remove zoning and sub-division restriction which now prevent such development.

B.D.H.I.O.U.

Doudai, A. INTRODUCTION TO REGIONAL PLANNING IN ISRAEL. 9 p. (Unpublished). 711.2 (56)

1. Mr. Doudai is the Chief Architect Planner of the Technical Department, Jewish Agency. Originally prepared for discussions in a U.N. Group, this paper sets fourth his views on the basis of the regional concept and on the application of that concept to the foundations of a planning policy for Israel as a Middle Eastern country.

2. The determination and delimination of a region is said to be fluid rather than precise, but the combination of geophysical and socioeconomic factors to form a coherent whole generally determines a region. Leslie Ginsburg is quoted (from the UN report on Regional Planning in Europe.) "Development is an amalgam of economic, social and physical factors. Although is practice it may have to be carried out in administrative areas such as countries, provinces or states, development should be planned in terms of regions, defined by economic, social and geographic considerations." Geophysical factors are said to make up the "ecological and geological foundation for the production of raw materials, the mainstay of the region's economy," on which economic activities are shaped to give stability and guarantee the smooth working of social forces. Social forces themselves are the "creative force, the prime movers of the process of regional integration."

3. Regional integration must include literally every factor; none can be considered by itself; none can be excluded. "Regionalism is a unifying force co-ordinating consciously all activities which make up the life of a region and aiming at its consolidation." Limited factor or "lopsided" regions such as rural-agricultural, industrial or even metropolitan regions are not regions at all but may be a part or an activity of a real region. One sided agricultural development and the separation of cities from their regions is especially attacked.

4. All sizes of communities are needed for the desired quality of regional integration. In keeping with the resources of a region, an equal distribution of cultural and material goods should be made throughout. For maximum unity, homogeneity and cohesion, a region should be large enough to embrace all territory with generally similar problems and resources. Beneath the prime similar problem, which is the unifying force of the region, diversity is to be desired for balance and strength. "For the diverse activities suplement and complement each other, building up the integrity, the wholeness and self-sufficiency of the region."

5. Turning to the Middle East area for regional analysis, water is said to be the prime unifying force or common denominator--to ensure full utilization of soil potential and thereby promote a higher standard of living for inhabitants. It is suggested then that Patric Geddes be followed in the use of the drainage basin as a regional geographic unit. Describing the morphology of the main watershed, two regions are distinguished: the Mesopotamian and the East Mediterranean, the dividing line running from the Apolonian plateau west of the Euphrates to the northern tip of the Syrian

plateau in the East Mediterranean Region of surplus water from the Mesopotamian Region is one problem. Another is repopulation of the Mesopotamian Region and of the northeastern part of the East Mediterranean Region. Underpopulation is obstacle to large scale development.

6. The East Mediterranean Region, considered separately, has considerable resources. Water resources are described in terms topographic distribution of rainfall and potentialities of harnessing the region's rivers plus tapping underground waters. Together with surplus water from the Mesopotamian, this would supply adequate irrigation for the full development of the region's fertile land. Not much is yet known about the geological potential in industrial raw materials, but the indications allow for speculation on the feasibility of large scale industrial development. This will necessitate considerable electric power supply, which might come in hydro-electric projects coordinated with regulation of water sources or possibly from atomic energy plants. In keeping with the regional aspect, a sound distribution of industrial plants whould be ensured; and the main regional communications network should be planned with special attention to accessibility to main ports and connections with other regions. As a link between three continents, a junction of international air, sea, road and rail routes, the East Mediterranean Region should see the creation of centers of international commerce.

7. To ensure the full utilization of the potentialities of the East Mediterranean Region it is imperative that a geotechnic solution be implemented which includes: water catchment, flood control, water diversion projects, soil conservation works, afforestation, industrial development, construction of power plants and large scale public works. Meeting the needs of an ever increasing population, to avoid widespread starvation, disease and disaster, is even more urgent.

8. Socioeconomic factors enter here, for (quoting from the anthropoligist, Boas) "Geophysical conditions by themselves have no creative force." The social and political situation of the region seems hopeless. The people have not reached social maturity; lack vitality, interest and enthusiasm necessary to advance envisaged projects. They do not constitute a creative force, nor can they become a force toward progressive development or regional integration. Cultural and material standards are very low; though progressive social forces are at work, the progress is slow and will take too long. Politically, there is none of the wish to co-operate between nations of the region and with neighboring regions which would be necessary to carry out large scale projects. The economic resources of the region are so meagre that comprehensive development could not possible rely on these resources alone.

9. While the problem seem insurmountable, the validity of the conception as a whole indicates the vital importance of finding solutions. Regional planning cannot stop at political boundaries, especially (with a few exceptions) since the region is inhabited by people of the same semitic race. Guidance and aid, both financial and otherwise, of appropriate international agencies will certainly be necessary. The history of the region indicates

that it was one of the most developed, cultivated and densly populated areas in the world. Traces of public works, a flowering culture and a high level of civilization are found for every period from ancient days to the early Middle Ages. With our advanced, technical civilization we should achieve even more in this region, if only a solution to the sociopolitical aspect can be found.

G.H. J. K. L.O.

Doudai, A. KIRIAT GAT NEW TOWN. (Unpublished)
711.417 (56)

1. Mr. Doudai is in charge of regional planning in Israel. This unpublished paper outlines the regional integration of a New Town with various sizes of communities and kinds of agricultural settlements.

2. Since Kuriat Gat is an integral part of the development plan for the whole district of Lachish, we must first understand the planning of the district. This regional development plan is based on the relationship and interdependence of the rural community (with its immediate services) and the centrally located urban community, Kiriat Gat. As such a center Kiriat Gat will perform the industrial finishing of agricultural raw material, and it will provide central urban services for farmers in outlying areas. Equilibrium between the rural and urban communities is sought. Made up of 750,000 dunams (38.5% of which are suitable for citrus and industrial crop farming), the district lies divided equally into plain and hills. Planned population of the area is 36,000; half to be engaged in agriculture, half in industry and services. A functional regional hierarchy of settlements is part of the plan: village, village group center and the rural center (the district urban center). All types of agricultural settlement will be included: Cooperative Small-holders Settlement (Moshav Ovidm), the Kibutz, and the collective settlement. In the Moshav Ovidim or 'Village' each family has its own plot of land and labor is on a family basis. Marketing, purchasing and credit, however, are cooperative, as are water, educational, cultural, health and insurance services. The Kibutz is a large-scale agricultural enterprise based on common membership and resources. Production and consumption are shared without distinction, and all services are communal; but adult members have individual family dwelling units. The Collective Settlement combines some characteristics of the "Village" and the Kibuts. The village is made up of 75-80 farmsteads; and, to provide effective services, four or five villages are planned as a group with a population of 1600-2000. This village center will have a large cooperative store, grain and agricultural implements store, cold storage, mechanical and artisan workships, tractor station; community facilities will include, primary school, continuation classes, community hall, library, post office, sports grounds, swimming pool, health center and clinic. Walking distance between the villages and such a center will be 2-2.5 kms. It is seen as a unifying social focus, as the meeting place of members of separate villages.

3. Situated on the crossroads of the Negev-North national highway and the Jerusalem-Seashore route and on the Beer Sheba railway, in about the center of the district will be Kiriat Gat, the urban center. Near the archeological sites of urban Lachish and Gat, the choice is natural; for it lies on the line marking the border between the two sorts of agriculture: that of the hills to the East and of the plain to the West. Industry, and major commercial, administrative, cultural and educational activities will be directed from here. Since agricultural processing will be done in Kiriat Gat, the income will remain in the district.

4. With the area fully developed the population of Kiriat Gat is expected to between 12,000 and 14,000; but area for extension to about 20,000 has been reserved.

5. The railway station will have industry on one side and business and commercial (leading to the civic center) on the other. It will be located at the entrance to the town center on the main road, which comes from the North, East and South.

6. Main industries will include a cotton plant with various branches for manufacture of textiles and byproduct processing for oil, margarine, etc.; a sugar beet plant allied to one for chocolate manufacture; a slaughter-house connected to plants for meat canning and leather industries as well as cold storage; other agricultural processing industries such as fruit and vegetable canning, spirits, starch extraction, etc. Service industries will be the building activities, bakery, ice plant, mechanical workshops, a garage and others.

7. The business centre will be made up of three or four banks, a post office, about eighty shops, five to six restaurants and cafes, thirty offices for professionals and firms, two hotels, one cinema. Repair workships have been planned off the business centre with an enclosed service court and a service approach road.

8. The administrative centre will include central government district office, local government offices and other public and semi-public institutions. A large hall in the cultural centre will be used also as a cinema, theatre, concert hall and auditorium for public meetings. Also an open-air theatre, library and museum will be in the civic centre, which will form the main civic square, at the end of the main commercial street near train and bus facilities. A health centre, clinic and a small emergency hospital are just off the centre. The secondary school, agricultural and technical college will be on the edge of the town, connected to the center by a wedge of open space. Heavy day and night time activities are expected in this centre.

9. Residential areas are planned in three neighbourhood units, each of which has a sub-centre for local services. One of the residential areas is reserved for future development.

10. Developments in the district in the two years since the plan was put together, indicate soundness of conception both for agricultural settlements and for the urban centre. These developments are characterized by speed and progress.

C.E.I.O.P.Q.

Fraser, J. M. (compiler) THE WORK OF THE SINGAPORE IMPROVEMENT TRUST, 1956 Singapore: The Trust, 1957. (Tables, diagrams and illustrations.) 66 p. 711.1 (5)

1. This is the annual report of the Trust. Mr. Fraser is chairman and manager, and in the report he describes the duties, policies, and work accomplished. An historical background as well as current activities is described.

2. Formed in 1927, the main duty of the Singapore Improvement Trust is to prepare and maintain the General Improvement Plan and to carry out Improvement Schemes. Since taking on the additional duties of preparing a "Diagnostic Survey and Master Plan of the Colony" in 1951, however, the Trust has carried out the full functions of a Planning Authority. Though it is the recognized government agency for public housing in Singapore, it has no statuatory power. The heaviest work of the Trust comes from the post-war housing famine.

3. Housing progress is indicated in that 12,407 of the 16,000 dwellings built by the Trust have been done since 1957, and these are being managed by the Trust. About $89.2 million has been spend on such housing. During 1956 there was some difficulty in obtaining cleared sites; but this situation has improved: 1275 houses and shops were completed during the year, while another 2575 were under construction. Building Programme No. 8, which is part of a five-year 20,000 unit slum clearance and housing scheme, was approved during the year. This programme provides fro 5582 dwellings and 235 shops in its loan funds of $44.1 million.

4. Housing policy of the Trust is geared to the provision of soundly constructed houses of good design, including amenities "which will encourage a better standard of living for the people who occupy them." Failure of policies with lower goals justifies this aim. The Trust deals mainly with families earning less than $400 per month, and it tries to build dwellings at 1/5 to 1/6 of this figure. But due to increasing cost of building materials, Government subsidy has been necessary in the more expensive sites. Subsidy is made only where rents (determined by the government on ability to pay) do not balance expenditure (including interest on sixty-year government loans).

5. Slum clearance, which needs to re-locate 190,000 people, will require an annual rate of production of 6000 houses over a twenty-year period. (Allowing for 3000 from slums cleared and an equal number from the waiting list for low cost housing.) If the plan is carried through, an annual loan equal to the recent one will be necessary.

6. Queenstown, the new satellite suburb, saw its first neighbourhood completed. The center of Princess Neighbourhood, which houses 1800 families, is dominated by Forfar House, a 14-storey block of flats. A very well illustrated brochure was released at the open ceremony at Forfar House in October, 1956. It describes the advantages of the Neighbourhood in English and Chinese. The second neighbourhood is by now in construction. Drainage

and squatter-clearance will be necessary before the other three neighbourhoods of Singapore's first New Town are completed.

7. The squatter problem is of great concern. A Working Party on Land Clearance and Ressettlement published its report outlining the problem with reference to the agriculture, semi-urban and urban settlers. A new Department within the Trust now coordinates Survey and Planning, Engineering and Resettlement sections of the Government in an approach to the matter. In order to clear land for housing, schools, hospitals and other public services, it will be necessary to resettle 2800 families as soon as possible. Accordingly, 63 sites making up a total of 22,716 acres have been selected as resettlement areas. This development is being carried out within the broad principles of the Master Plan, so that undeveloped land on the Island may be best used in the future. Associated with squatter questions are those of unhealthy shack areas in and around the city. An additional 6500 families live in such conditions.

8. Housing management has been changed to a branch administration system. "Housing management problems are largely those of human relations, and the scheme of decentralisation will enable housing officers and Lady Housing Visitors to keep in closer contact with the individual tenants in the Trust's estates. There has been a definite improvement during the year in relations not only with tenants, but with prospective tenants and in this respect the Lady Housing Visitors are carrying out work of the utmost importance."

9. Planning activities have included further work on the Master Plan. Since this had already been presented in exhibit, and outstanding objections were under consideration by a Committee of Ministers, it was hoped that the Master plan will be approved in 1957.

10. Planning administration is largely "back-room" work. 1347 applications for development were considered by the Trust's Planning Committee during the year. Speed has been important in this work, for the greatest enemy of planning is administrative delay."

11. Development Plans in considerable detail will have to be prepared for the central areas and also for road proposals, expansion of villages and rural development, in accordance with provisions of the Master Plan. Highway priorities, drainage proposals and industrial development are also discussed.

C.D.K.L.O.U.

Government of Southern Rhodesia. WHAT THE NATIVE LAND HUSBANDRY ACT MEANS TO THE RURAL AFRICAN AND TO SOUTHERN RHODESIA, A FIVE YEAR PLAN THAT WILL REVOLUTIONIZE AFRICAN AGRICULTURE. Salisbury, Southern Rhodesia: The Government Printer, 1955.
711.3 (68)

1. This report is a review of achievements and prospects of land conservation and reclaimation under the Native Land Husbandry Act of 1951. The results of the plan's implementation and the accelerated implementation programme are outlined. Government officers from the Ministry of Native Affairs, and the Treasury participated in the preparation of the report.

2. The history of native cultivation practices is given as background. Consisting of the Matabele and Mashona tribes, the natives have carried on the traditional Kraal and its pattern of land cultivation. This is a shifting rather than a rotational system as land becomes depleted. In 1902 the native population was stable (due to wars, desease and famine) at about half a million, and there were about 55,000 cattle. By 1944 the native numbers had increased to 1,390,000 under the health protection of the government, and cattle had risen to 1,916,000 in number. Since lands available to these natives was rapidly shrinking under European pressure, old shifting agricultural methods became inadequate; and overburdening of cultivated and grazing land resulted. Tied in with this was the casual labor system by which a native would leave his kraal to work in the European sections of the country. He would, however, retain membership in the kraal and thus the ability to return at any time and claim land. Or he might leave his wife and family to manage the land while he sought work in the cities, contributing to the efficiency of neither occupation. The direction of these trends was felt to indicate disaster, and several alternatives were suggested. The Native Land Husbandry Act of 1951 was intended as "a shot in the right direction, at a target beyond the horizon."

3. As the backbone of the plan, the Native Land Husbandry Act is divided into five parts. The first section sets up standards for agricultural practice in order that the natural resources of the land may not be depleted. Included are rotation methods, fertilizers, erosion prevention, stock control, and general farming practice. The second section deals with the grant of grazing rights. Grazing rights are given natives for only as many cattle as land held will support, and a pro rata reduction of herds is made beyond this. Such grazing rights are negotiable. Additionally rotational grazing and paddocking have begun; and while lands are still held in common, the forces necessary for individual responsability appear to be working. The third section deals with the grant of farming rights. Herein is the real move against the tribal communal customs. It is designed to halt the fragmentation of land holdings and remove the squatter problem. Basic to this is the definition of the conomic unit of arable land, which depends on rainfall, soil, etc., in each particular area. At the time of application of the act, each cultivator of land in an area will be allocated an economic farming unit. The practice in overpopulated areas will be to allocate on the basis of existing holdings; and there may be many holders of small, uneconomic

farmlands; but restrictions on sale andpurchase will remove this problem over time, perhaps. Only holders of farming rights may purchase additional rights, but not in excess of three times the normal economic unit and not so as to leave the holder with less than an economic unit. Grazing and farming rights are carefully protected by law. Because of the individual land holdings projected, it is felt necessary to set aside land for villages, towns and business centre in advance. The fifth and final section of the law provides for compulsory service of stock or land holders where necessary for the whole economy of the area.

4. The economic and sociological effects of bringing the Act into operation are discussed. Economically, by improved marketing procedures, it is expected that the annual cash income of Native Agriculture can be raised from £3.5 to £11 in the first eight years of implementation, and all things considered, it is expected that this figure will rise to £20 in twenty years*. Sociologically, the improvements in facilities brought with increased income to the native reserves. Even greater benefits are expected, however, in family organization. By tying fairly permanently a group of natives to the agricultural occupations, it is hoped that part-time squatting will be eliminated. Social and moral benefits would appear with the elimination of the squatter pattern.

5. The development of the land use plan has the highest importance for conservation of natural resources. This plan embraces 31,000,000 acres (47,000 square miles) and will cost £7 million (of which £4 million will be contributed by native farmers themselves). The plan will consist of the development of water supplies, land classification (arable, grazing, forest land and waste land). surveying and mapping by aerial survey (21% of the classified land has not been mapped), village settlement, and reserve development folow-up planning.

6. Accelerated implementation of the plan is outlined, for the 1954 report of the Natural Resources Board indicated the situation to be even more urgent than had been thought. Ten years is seen as the maximum time to have the provisions of the Native Land Husbandry Act in working force, together with extension and follow-up work. Achievements expected by 1961 are allocation of land, construction of narrow based terraces, aerial photography, and rotational grazing schemes. The plan includes year-by-year projects for the period 1955-1961.

7. Appendices provide Southern Rhodesian African agricultural statistics, the necessary detailed steps in implementation of the Land Husbandry Act, financial data concerning the plan, and a land apportionment map of the country.

*(Expressed in millions).

D.I.O.

Pré, Roland. VERS UN URBANISME AUTHENTIQUE DE LA NAISSANCE DES GRANDS ENSEMBLES A LA MOBILISATION DES MASSES. Architecture d'Aujourd'hui Feb., 1957. pp. 1-2 (Map and diagram). Text in French.
711.4 (6)

1. Since the war, construction in Afrique Noire has been realised as rapidly and cheaply as possible because of needed and urgent urban development. While a Plan with public financing existed, a technical base was lacking. Also the rush and the obligation to use very quickly the credit of the Plan did not leave time to think through the African perspective and therefrom create a real African urbanism. Piecemeal extension of existing structures and suburbs has produced an often mediocre and almost always inhuman result.

2. But the coming years will give opportunity of a better planning. Some large industrial emsembles will be realised on land in the middle of the wilds, new to both architecture and planning. Immense capital and teams approaching the technics and human problems with the best, they have to make these "Grands Ensembles" (in Mauritanie, Sénégal, Guinée, Togo, Gabon, Moyen Congo) a success. The African native must feel "Chez lui" while at work as well as in his social and family life. As for the industrial centers, "il faut qu'ils soient, pour la brouse environnante, le point de départ d'un renouveau adapté aux données profondes de l'Afrique et non l'image hostile d'un modernisme étranger."

3. Such centers require not only a scheme with factories, communications, zone of habitat, etc., but also a forecasting study of economic, social and political repercussions with such realization: increase of traffic, shortage of food products around the planning zone, confusion that the influx of manpower attracted by this zone will cause in the deserted regions.

4. Similar preoccupations will be considered in specific problems of urbanism and of habitat: planning of the region with problems of gathering manpower, food cultures, aid to habitat and the local economy. In the zone closest of attraction, the development of secondary activities depending on the "Grand Ensemble" is forseen. In the heart of the "Grand Ensemble" the problem is of general zoning: placing and mutual relation of the industrial buildings, workers quarters, and the distribution of various administrative, commercial, and social activities. But the most important choices are about "le mode de vie" of the inhabitant itself, concerning his collective or individual aspects: whether the life of the industrial personnel would be organized separatly or not; creation of a modern isolated world in the middle of the ancestral life, to what point the European, African, ancestral and evolved life should be mixed, especially in terms of "equipement social". Finally the essential point, on which theme should the African House be conceived "dans quelle mesure est-ce la conception de la vie ancestrale ou celle de la vie moderne, ou une adaption de l'une à l'autre qu'il faudra choisir?" Through the house and the city, the whole African mode of life can be influenced. Such choices involve a fundamental option on the way the Western contribution will more or less unite with the deep

sentiment of the African man and his human traditions. Only aid, not an enforcement of artificial views will help. Of course the classical problem remains the choice of realization technique. But the right solution here will be found as it depends on soil, climatic conditions, and possibilities of using local material.

5. Although the great industrial centers may be a starting point of life adapted to the longing of men. They will only interest a lowly part of the population. "Rien de définitif ni de durable ne sera donc acquis dans ce domaine tant que nous n'aurons pas touché la masse de la population." All the rules of this habitat have to be defined, the conception will vary according to the regions, races, as a function of ties which will continue to connect the African to his activities and to his ancestral ways of life. The basic problem will be to put up the practical means of realization. They should have as the objective, considerability. "Car l'Afrique veut franchir rapidement les étapes qui la séparent du monde moderne; il s'agit pour elle d'une véritable transformation du cadre de vie." Such effort is possible only with "le concours actif des masses rurales." Technique and European capital are only an accessory with regard to the contribution resulting from mobilisation of all energies. The solution can be found only from by those capable of developing and maintaining the constructive will of the population.

6. But it is, in the final analysis, the terms of political evoluation of Africa in which the problem of urbanism and habitat poses itself. The industrial centers will provide a view to study a limited solution; but without a whole autochtonal way of life, this will not be definitive.

7. Otherwise the industrial emsembles, rather than being sources of hope, will be seen by the underdeveloped people as symbols of a hostile and foreign world - which all the vital forces of the African masses will seek to eliminate. "A nous de la comprendre et d'y réussir."

8. Articles on African architecture, industrial development in Cameroun, and considerable material on Abijan, Dakar, Conakry, and Leopoldville by various architects follow. (pp. 3-25) All are well illustrated.

C.O.P.W.

Uganda Protectorate. A FIVE YEAR CAPITAL DEVELOPMENT PLAN, 1955-1960; The first revision, Feb., 1957. (Ref. Vol. 3, HIB - GA : 18, Feb., 1957 p. 99).
711.2 (60

1. This report sets out a revised assessment of resources available to the plan together with implications of such a plan. Reasons for the proposed changes from the Capital Development Plan, 1955-60, published at the end of 1954 and adopted in Feb., 1955, are outlined.

2. The original plan provided for no implementation, but government acceptance of some provisions has been forthcoming. Since the Plan was set out, an increased need for expenditure on roads, urban services, agriculture and rural water supplies has been recognized. More housing for entitled officers has been called for. The separate Uganda Electricity Board wants to borrow an additional £5 million (mainly on distribution schemes) during the planning period. But expenditures on some projects is lower than present arrangements. Finally, sone revisions may be called for by the simple availability of funds.

3. Content of the revised Plan. Following the assessment of the available resources, the residual implications of the Plan and the costs of financing are reviewed. Separate attention is given to development activities by public corporations, including the Uganda Electricity Board, as well as the Uganda Development Corporation, Ltd., which has been active in stimulating investment in both industry and agriculture. Portions of the Plan allocated to the following portfolios are described: The Chief Secretary, Minister of Finance, Minister of Natural Resources, Minister of Local Government, Minister of Social Services, Minister of Rural Development, Minister of Land Tenure, Minister of Commerce and Works, Minister of Corporations and Regional Communications. Special discussion is accorded to the problem of staff housing.

4. Balance and phasing of the revised Plan. Phasing is slated to be accomplished over the next three years. The goal here is to ensure that capital expenditure by the government is equal annually during the period and that yearly work load does not exceed capacity. Balance is defined in this situation as giving priority to those projects which will increase production, but at the same time increasing substantially expenditure for health and educational services. These latter are felt to ensure the maximum benefit from development; and, since the country's development is contingent on knowledge by those to develop fertile, watered land, they are a basic essential. Another form of balance is between transportation and communication facilities and the means of production they are to serve.

5. Financial aspects of the Plan. The guiding principles are that a steady rate of progress should be maintained at the maximum level sustainable by available resources but that capital expenditure cannot be at a level beyond the country's ability to finance the consequential recurrent expenditure without substantial tax increases.

a. Study has led the government to the conclusion that a Capital Development Plan of 34 million Pounds can be financed. Estimates of revenue and consequential recurrent expenditure are felt to be close enough together to warrant proceeding with the implementation of such a Plan, so long as recurrent implications are under continued review.

b. In order to obtain both continuity and necessary review, the Plan is to be projected three years ahead each year, together with a review of past years activities and available capital. This information is to be included as an appendix to the budget.

c. The capital budget is to be referred to the Development Council for discussion and advice in order that there may be adequate discussion of proposals.

d. More effective accounting is proposed so that a clearer picture of funds available for development may be easily obtained. In cases where it may be found that developmental expenditure is too high, a deliberate choice will have to be made among:

- Deletion or deferment of projects.
- Tax increases, if projects are of high enough priority.
- Use of surplus balances to finance a deficit budget.

e. It will be necessary to borrow 14 million pounds in order to finance the 34 million Pound Capital Development Plan. Most internal and external borrowing sources charge such interest that real increases in taxation might be necessary. However, the monies of the Price Assistance Funds, have no interest charge. It is recommended then that 5 million pounds be borrowed from the Cotton Price Assistance Fund and 2.5 million pounds be borrowed from the Coffee Industry Board Fund to deal with items in the capital development Plan. Further the access to some funds in the custody fo the African Development Fund on a interest-free basis is suggested.

E.F.J.

United Nations, Technical Assistance Board. TECHNICAL ASSISTANCE ACTIVITIES IN INDIA. TAB/IND/R.14, 13 May, 1957. And United Nations Monthly Bulletin, July 5, 1957.
711.417 (54)

1. The report of Mr, James Keen, Resident Representative of the U.N. Technical Assistance Board, for January, February, and March, 1957 covers three New Towns set up for new steel manufacturing centers. The same three New Towns are the subject of Prof. Fred Adams' Final Report to the Government of India. This report is a result of three weeks spent in India from February 6, 1957.

2. Bhilai: Contracts have been concluded for civil engineering work in all zones of the plant. The railway line to the ore mines is under construction and is expected to be completed on schedule. Preparation of the site is almost complete in the by-product area and in the coal preparation area. The master plan for this undeveloped rural area near Bombay was prepared by D.S. Bajpai. A site for a 300 room hotel was selected; also the location of 200 houses for officials was chosen. A sector containing 1200 dwellings for steel workers was almost completed. 91 engineers for this project are under training in various parts of USSR.

3. Rourkela: A contract has been concluded with a West German firm for the by-product plant. Foundation work for the coke oven plant has begun. Five and ahalf miles of railway track have been laid. Orders have been placed for 24 diesel electric locomotives and track material for 50 plant area. Near New Delhi, the chief problem is the integration of new development in a regional plan. Haphazard development taking place around the existing planned steel town of Jamshedpur makes the necessity for such an integration clear. About 800 houses have been completed in the township and nearly 2,000 are under construction. Eighty engineers were sent to West Germany for training, of whom 12 have since returned.

4. Durgapur: The temporary railway sidings to receive construction material have been built. The over-riding problem in this industrialized area near Calcutta in its integration into a regional plan. Joseph Stein was responsible for the master plan, and regional studies have been made by students of the Indian Institute of Technology, Kharagpur, under the direction of Prof. V.N. Prasad. 56 houses have been constructed and 570 are under construction. The British Steel Federation has agreed to train 300 engineers and technicians for this plant. This is being arranged under the Colombo Plan.

5. Steel production is regarded as a yardstick of progress for India. Production at present is 1.3 million tons annually, and planning is for 4.5 million tons in 1960

6. 'Estensive comments' have been prepared by the Housing, Building and Planning Branch for Prof. Adams' report. There is interest in using this project as a model for other developing countries.

GENERAL

D.F.O.R.S.T.

Architects Co-Partnership. BUILDING IN THE TROPICS. The Architects' Journal May 16, 1957. No. 3246, Vol. 125) pp. 745-750. (Illustrations)
690.37 (6)

1. This is a summary of special building problems encountered in West Africa, notably Nigeria. Architects Co-Parnership has had offices in Lagos for the past three years.

2. Since the economic expansion and development of West African lands involves considerable building, technical experts will have to be brought in from the outside for some years.

3. Problems of an architectural office in Nigeria, for example, include lack of trained indigenous staff, the high cost of maintaining an expatriated staff, difficulties in communication of new technical problems and research information, and high necessity for on the job supervision due to poor craftsmanship. It was necessary to have closely connected offices in Lagos and in London.

4. Climate of the area affects the physical and emotional demands of the people of the area. Southern Nigeria, in the hot humid zone, finds the need to imitate shade conditions in every building.

5. The force of the sun's heat makes it necessary to have roofing which will throw off as much heat as possible and in no way store what it does absorb. Aluminium roofing with ventilation space below and a plasterboard ceiling appears to be the best, as it adds only 3^{o} F to the outdoor shade temperature. Shading devices are necessary for walls. Fixed or vertically movable louvres can aid, depending on the orientation of the building.

6. Breeze exploitation is important as it is the chief means of body cooling. Highly movable louvres are needed, and recent research indicates that maximum air flow is induced by having the leeward openings larger than the windward.

7. Sound control becomes a problem due to the necessity for open buildings. In schools, for example, it seems best to keep ceilings "hard" in order to reflect the teacher's voice. But beyond a few such solutions, it is a planning problem.

8. Rain and some severe line squalls require certain special approaches to roof types and louvre cill drainage. Butterfly roofs appear most successful on high rise buildings, while a pitched roof spilling directly into a large drainage channel works better in single story units.

9. Building materials and craftsmanship pose serious expense problems. Most of the construction materials for larger buildings must be imported, and can increase the cost considerably. This is especially true for roofing. Unskilled native labor requires supervision. Only in this way can desired standards of craftsmanship be achieved.

10. Planning is said to consist of stock solutions taken from the European setting, some of which are 30 years old. The problems of combining technical advance with the continuation of the rich Nigerian way of life are not being given the imaginative attention deserved. The architect's role is thus very difficult.

D.N.

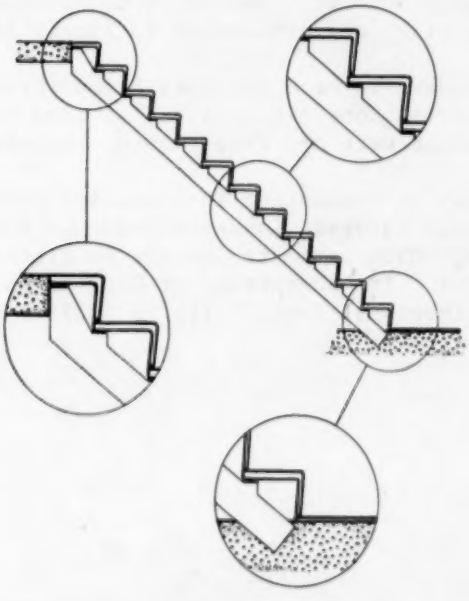
Architectural Record. "LIVING WITH THE SUN" The record reports - meeting and miscellany. July 1957. p. 28.
728.3 (73/79)

1. "Living with the sun" is the title of an international architectural competition which seeks a design for "A residence which will control, adapt, store and utilize directly and indirectly the sun's energy to create a livable and pleasant climate for man's domestic activities."

2. The competition is sponsored by the Association for Applied Solar Energy at the Phoenix, (Arizona, USA) Association of home builders. The residence will be erected on a one-acre site near Phoenix as soon as possible after the judging. The jury has been scheduled to meet in mid-September.

Centro Interamericano de Vivienda. Servicio de Intercambio Cientifico. ESCALERA PREFABRICADA DE CONCRETO. Bogotá, 1957. 10 p., illus., plans. (Serie: Divulgacion no. 2.) Text in Spanish. 69.026.

1. The prefabricated concrete staircase (shown below) resulted from experiments by the Centre during 1953 at their Barrio Quirogo house. It was developed by a group of architects and engineers and is considered a highly succesful development of the staircase unit.



A.D.M.

McLaughlin, Kathleen. FOOD OUTPUT UP BY 3% IN WORLD, U.N. Unit Reports 1956 Rise Maintained Edge Over Population Increase. New York Times, September 17, 1957.
338 : 658.5 (1)

1. Information is taken from a Food and Agriculture Organization report submitted by B.R. Sen of India, Director General. The report was submitted September 16, 1957.

2. After remaining stable for several years, world food production increased 5% in 1955 and an additional 3% in 1956. It is estimated that production will remain constant into 1958, while total world population increases by 1.6%. The rate of increase of food production in the less developed regions was above the world average.

3. Comparing production to goals set five years ago, it was found that these had been reached in four years rather than the scheduled five. The goals for the year 1956-57 were exceeded by 3% on a world basis. This increase was especially clear in the Far East. African and Middle Eastern production was about equal to estimates. South American output was less than estimates, but the goals had been set very high in anticipation of population increases.

4. Export increases, led by a 30% increase from North America, were important especially with regard to wheat. Production of wheat dropped a little due to frost damage to winter wheat in Australia and Western Europe.

5. Other commodities showed a net increase in production. Coarse grains increased by nearly 10,000,000 tons, and carry-over stocks increased by 4.600,000 tons. Rice did especially well, showing an increase in production, consumption, and trade, while the 2000,000,000 ton figure. The increase was mainly in Asia; the United States and Italy limited rice production.

6. Sugar consumption exceeded production and left reserves low, while the world price nearly doubled. Demand in under-developed lands increases as living standards rise, and production is likely to be stimulated.

7. The farmer appears to have received higher prices for his products in the world, but indications are that he has also had to pay higher prices. In only a few countries were net income gains recorded for the farmer.

8. A brief summary of production in Communist countries is included for the first time. Grain harvests in Eastern Europe seem to have declined by about 10% even though USSR harvests (mainly in Siberia and Kazakhstan) increased by some 20%. The percentage of USSR grain produced by Siberia and Kazakhstan has increased from thirty in 1953 to seventy in 1956.

D. H. N. O. W.

Mora, Jose A. (Dr.) PUNTOS DE VISTA... Vivienda & Planeamiento. Numero 23, 1957. (Text in Spanish)
331.86 (7) (8)

1. The article consists of extracts from Dr. Mora's address closing the 1956 course at the Centro Interamericano de Vivienda. Dr. Mora is the Secretary General of the Organization of American States, Organizacion de los Estados Americanos (OEA).

2. The work which we must now approach in America is clearly outlined: First, develop and extend programs of technical and educational cooperation in all countries. Better than simply sending technical experts from highly developed countries to those less developed would be a permanent system of technical education having its roots in the very countries of a determined region, or a group of several countries with similar problems. This development of permanant institutions within the region is held to be one of the principal objectives, in the long run, of the Panamerican Union. Regional projects and programs of thia type represent the principal means for the less developed nations to defend their own interests and gradually to form their own professional corps; and such projects are especially capable of bringing an experienced knowledge of the political, economic and social phenomena to confront the problems of the region.

3. The second main objective is seen as the strengthening of national institutions, particularly improving public administration and trying to bring about continuity in national plans, foresight and programming. It is said that national institutes of housing and planning are key instruments in this process of fortification of the total pattern of national institutions. During the past two years, an increasing number of such agencies have appeared in Latin American countries. Many of the first students of the CINVA helped create or are holding responsible positions in such agencies. These agencies are key instruments because of the necessity for coordinated action to face the housing problem, with special emphasis on programming, planning, continuity of production, the assessment and utilization of individual, domestic and other national resources; because agencies have important responsabilities in the planning and promotion of community services, such as water systems, sewage, electricity, etc., withtout which no country can progress: because such agencies can initiate programs of community development, give life to small rural communities in their efforts to achieve their own betterment; and finally because such institutions can equally offer assistance to municipalities needing resources particularly oriented to the planning of the community.

4. The concluding wish is that students going back to their own countries will not lose the idealistic spirit of crusaders in the social field of housing, for these qualities are needed in all countries to unite knowledge of practical techniques for execution and administration of specific programs.

N.W.

Housing and Home Finance Agency, International Housing Service. COOPERATION WITH TECHNICAL SCHOOLS. (Ideas and Methods Exchange No. 45) April, 1957.
331.86 (1)

1. This is mainly a discussion by Harold Robinson, former International Cooperation Administration Housing Adviser to Israel, concerning his successful experiences working with the Israel Institute of Technology (Technion). A listing of architectural and engineering schools is provided for Technical Cooperation countries.

2. The ways in which technical schools in a host country can be of help to a visiting advisor are several: as sources of information on available technical know-how, reservoirs of prospective participants for training, depositories of statistics on country conditions, and channels for disseminating information and introducing new ideas.

3. Following are technical schools in Technical Cooperation countries, which are said to be taken from Universities of the World Outside the USA, by W.W. Chambers, 1950.

AFGHANISTAN:	Univ. of Kabul (no reference to architecture or engineering.)
BOLIVIA:	Universidad Autonoma "Tomas Frias"-- Engineering University of St. Andres--Architecture
BRAZIL:	University of Brazil--Architecture.
CHILE:	Catholic University of Chile--Architecture and Engineering Catholic University of Valparaiso--Architecture and engineering University of Chile--Architecture and Engineering Technical University--Engineering
COLOMBIA:	National University of Colombia--Architecture and Engineering
DOMINICAN REPUBLIC:	University of Santo Domingo--Architecture
EGYPT:	Farouk I University--Engineering Fouad I University--Engineering
EL SALVADOR:	National University of El Salvador--Architecture and Engineering.
GUATEMALA:	University of San Carlos de Guatemala--Engineering
HONDURAS:	Central University of the Republic--Engineering
INDIA:	University of Bombay--Engineering University of Calcutta--Architecture and Engineering

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INDONESIA:	University of Indonesia--Engineering
IRAN:	University of Tehran--Architecture and Engineering
ISRAEL:	Hebrew Institute of Technology--Architecture and Engineering
KOREA:	Seoul National University--Architecture and Engineering
LEBANON:	American University of Beirut--Engineering St. Joseph University--Engineering
NICARAGUA:	Central University of Nicaragua--Engineering
PAKISTAN:	Dacca University--Engineering University of the Punjab--Engineering University of Sind--Engineering
PANAMA:	University of Panama--Architecture and Engineering
PARAGUAY:	National University of Paraguay--Engineering
PERU:	National School of Engineers--Engineering Pontifical Catholic University of Peru--Engineering
PHILIPPINES:	University of Philippines--Engineering Adamson University--Architecture and Engineering Ateneo of Manila--Engineering University of San Tomas--Architecture and Engineering
SPAIN:	University of Madrid--Architecture and Engineering
TAIWAN:	Technical College of Engineering--Architecture and Engineering
THAILAND:	Chulaloughoru University--Architecture and Engineering
TURKEY:	Roberts College--Engineering Technical University of Istanbul--Engineering
URUGUAY:	University of the Republic--Architecture and Engineering
VENEZUELA:	University of the Andes--Engineering
YUGOSLAVIA:	University of Zagreb--Engineering.

B.I.O.W.

Ministry of Housing and Local Government. GREEN BELTS. Circular No. 42/55.
3rd August, 1955.
712.25 (42)

Reproduced in full.

Sir,

1. Following upon his statement in the House of Commons on April 26 last (copy attached), I am directed by the Minister of Housing and Local Government to draw your attention to the importance of checking the unrestricted sprawl of the built-up areas, and of safeguarding the surrounding countryside against further encroachment.

2. He is satisfied that the only really effective way to achieve this object is by the formal designation of clearly defined Green Belts around the areas concerned.

3. The Minister accordingly recommends Planning authorities to consider establishing a Green Belt whereever this is desirable in order:

   a. To check the further growth of a large built-up area:
   b. To prevent neighbouring towns from merging into one another; or
   c. To preserve the special character of a town.

4. Whereever practicable, a Green Belt should be several miles wide, so as to ensure an appreciable rural zone all round the built-up area concerned.

5. Inside a Green Belt, approval should not be given, except in very special circumstances, for the construction of new buildings or for the change of use of existing buildings for purposes other than agriculture, sport, cemeteries, institutions standing in extensive grounds, or other uses appropriate to a rural area.

6. Apart from a strictly limited amount of "infilling" or "rounding off" (within boundaries to be defined in Town Maps) existing towns and villages inside a Green Belt should not be allowed to expand further. Even within the urban areas thus defined, every effort should be made to prevent any further building for industrial or commercial purposes; since this, if allowed, would lead to a demand for more labour, which in turn would create a need for the development of additional land for housing.

7. A Planning Authority which wishes to establish a Green Belt in its area should, after consulting any neighbouring Planning Authority affected, submit to the Minister, as soon as possible, a Sketch Plan, indicating the approximate boundaries of the proposed Belt. Before officially submitting their plans, authorities may find it helpful to discuss them informally with this Ministry either through its regional representative or in Whitehall.

8. In due course, a detailed survey will be needed to define precisely the inner and outer boundaries of the Green Belt, as well as the boundaries of towns and villages within it. Thereafter, these particulars will have to be incorporated as amendments in the Development Plan.

9. This procedure may take some time to complete. Meanwhile, it is desirable to prevent any further deterioration in the position. The Minister, therefore, asks that, where a Planning Authority has submitted a Sketch Plan for a Green Belt, it should forthwith apply provisionally, in the area proposed, the arrangements outlined in paragraphs 5 and 6 above.

(Signed) A. B. Valentine, Under Secretary.

10. Annex to Circulat No. 42/55 (printed on same page as the Circular). Statement by the R. Hon. Duncan Sandys, M.P., Minister of Housing and Local Government. In the House of Commons on 26th April, 1955.

11. "I am convinced that, for the well-being of our people and for the preservation of the countryside, we have a clear duty to do all we can to prevent the further unrestricted sprawl of the great cities.

12. The Development Plans submitted by the local planning authorities for the Home Counties provide for a Green Belt, some 7 to 10 miles deep, all around the built-up area of Greater London. Apart from some limited rounding-off of existing small towns and villages, no further urban expansion is to be allowed within this belt.

13. These proposals if strictly adhered to, should prove most effective. For this the authorities in the Home Counties deserve much credit.

14. In other parts of the country, certain planning authorities are endeavouring, by administrative action, to restrict further building development around the large urban areas. But I regret that nowhere has any formal Green Belt as yet been proposed. I am accordingly asking all planning authorities concerned to give this matter further consideration, with a view to submitting to me proposals for the creation of clearly defined Green Belts, wherever this is appropriate.

15. However, I do not intend on this account to hold up my approval of Development Plans already before me. Additional provisons for Green Belts can be incorporated later."

C.K.N.

United Nations, Technical Assistance Board. TECHNICAL ASSISTANCE ACTIVITIES IN IRAQ. Reports for the months January-February-March 1957. N.Y. TAB/IRQ/R.12. 13 June 1957.
711.583 (56)

1. Reproduced below is the item IRAQ 112-55; Community Organization for Social Welfare from page 7. Heading is "Chapter III-REPORT ON PROJECTS, Section A. Current Programme, a) Projects in Operation, TAA. Final editing of the report was the work of the Officer in charge (the Programme Officer), Mr. L.P. Beleky.

2. Community Development. Some disappointment was felt about the proposed plan for a high council for Community Development, as the provisions made in the budget did not appear to be adequate. There were also other indications that the implementation of the plan might not be as rapid and vigorous as had been hoped. Nevertheless, the UNTAA team, in close collaboration with the USOM team and the Ford Foundation, continued its efforts in this direction. A number of conferences were held for this purpose. The Mutassarifs of Mosul, Kirkuk, Karbala and Diwaniyah took steps to initiate Community Development projects in their liwas. Each of these projects would touch a population of about thirty thousand people. The UNTAA team played an active part in advising on these schemes and in arranging for the construction of buildings and so forth. Steps were also taken to prepare the programme for training ninety village level workers. The three projects established in 1956 in Kut Liwa are in full operation, each project covering about twenty thousand people. Ten village level workers are operating in each and fifteen more workers are about to be trained for them. The social progress in this direction has been receiving a great deal of strong support from the authorities.

3. The following is reproduced from page 3, Chapter I, section B, (b) Other Information:

4. Development Week. One of the outstanding events which took place during the quarter under review was the celebration of a "Development Week", organized by the Government in connexion with the completion and the starting of many development projects. The projects represented a large number of undertakings by the Development Board under the country's development programme. Many of the week's ceremonies were carried out under the patronage of H.M. The King. The list included the opening of new bridges, factories, public buildings, roads, housing projects and water plants, factories, schools and hospitals. A number of exhibitions were also organized; the major ones were in connexion with housing and irrigation simultaneously. The Baghdad Pact Secretariat celebrated the opening of its atomic library and put up an exhibition on peaceful uses of atomic energy. Invitations to attend the week's activities were extended to many foreign personalities and newspaper men. Six personal invitations were sent to the United Nations Agencies in the country.

E K I S T I C S

HOUSING AND PLANNING ABSTRACTS

CLASSIFICATION SYSTEM USED BY DOXIADIS ASSOCIATES

A The Problems

B The Policies

C The Programs

D People, Development, and Ekistics**
- Geographic factors
- Social factors
- Industry
- Agriculture
- Transportation

E Houses

F. Structures (exclusive of Houses)

G Community services
- Utilities and Social Services

H Regions

I Major urban centers

J Market towns
- Medium-sized and small towns
- New towns

K Villages
- Rural land

L Farms

M Surveys
- Census data
- Topographical surveys

N Research (and Technical Education)

O Planning (and Landscaping)

P Financing

Q Urban Land

R Labor

S Materials

T Construction
- Systems of Building and Costs

U Implementation

V Management

W Administration

X Legislation

**Refers to centers of activities in relation to their surrounding regions.